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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,819	04/19/2001	Akihiro Isomura	TNG-3-US	7427

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EXAMINER

TAKAOKA, DEAN O

ART UNIT PAPER NUMBER

2817

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/807,819

Applicant(s)

HWANG ET AL.

Examiner

Dean O Takaoka

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-14, 16, 21, 23 and 24 is/are allowed.
- 6) ☒ Claim(s) 1-5, 17-20 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 01 March 1102 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 22 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation where the "dielectric resonator being devoid of metal material" is considered "**new matter**" by the Examiner. It appears that the limitation was not originally disclosed by the specification and the Examiner invites the Applicant to show where in the disclosure that would contain this "new matter" limitation.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishitobi.

Ishitobi (Fig. 4) shows the well-known dielectric resonator with a first and second chamfered ridge portions not in parallel (discussed in the reasons for rejection of claim 1 of record) and further discloses three resonator elements of a band pass filter

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surrounded by a machine structure (0009 – defined by the Examiner as a housing) with the box plated with metal, further that it is suggested that an individual cube element may be plated and is therefore interpreted by the Examiner that an exterior housing (not shown) encloses the three step (resonator element) band pass filter (Fig. 11).

Ishitobi does not explicitly state that the dielectric elements of the three step filter are not plated by metal but suggests that the dielectric material is not plated, rather a “box” (e.g. housing) enclosing the resonator elements, thereby inherently permitting a magnetic field to extend outside the dielectric block (e.g. individual resonator elements).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the well-known plated resonator element disclosed by Ishitobi with the well-known art-recognized equivalent non-plated resonator elements. Such a modification would have been obvious in that it is well-known that single elements (e.g. stand alone resonator elements, non-housed) are metal plated and also non-metal plated but multiple elements within housings (e.g. multiple resonator filter elements enclosed by an exterior housing disclosed by Ishitobi) are not conductively coated, further that it would have been a mere substitution of well-known art recognized equivalent resonator elements to substitute the conductively plated resonator elements with non-plated resonator elements thus suggesting the obviousness of the modification.

***Claim Rejections - 35 USC § 102***

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ishitobi (Japan Patent No. 09-148810) for reasons of record.

***Claim Rejections - 35 USC § 103***

Claims 2 – <sup>5</sup>~~7~~, 13, and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishitobi for reasons of record.

***Response to Arguments***

Applicant's arguments filed March 11, 2002 have been fully considered but they are not persuasive.

Applicant's arguments with respect to newly added claim 22 have been considered but are moot in view of the new ground(s) of rejection.

With respect to claims 1 – 5 and 17 – 20, the Examiner asserts that the prior art of Ishitobi meets all of the limitations of claim 1 and would have been obvious over claims 2 – 5 and 17 – 20 and thus the rejections are maintained.

It is argued that “one important feature of the present invention is that the chamfer involves a single ridge” while Ishitobi (Figs. 6 and 8) “clearly shows that it relies upon having chamfers on opposing ridges” to which the Examiner agrees, however while one embodiment of the present invention may be with only one chamfer, this is not claimed, rather two ridge portions are chamfered and non-parallel to each other thus the arguments are not commensurate with what is being claimed.

The Applicant's arguments clearly acknowledges that Ishitobi has “chamfers on opposing ridges”. Ishitobi (Fig. 4) in fact has dual chamfering on two opposing sides (12a, 13a and 12b, 13b) thus chamfer 12a is not parallel but perpendicular to 13a or

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12a is perpendicular to 13b, thus Ishitobi meets the limitations having a "a first plane formed by chamfering a single one of a ridge portion of said dielectric block and a second plane formed by chamfering a single one of a ridge portion of said dielectric block, said first chamfered ridge not being parallel to the second ridge portion".

Ishitobi's ridge portions (all) are cut at some angle (shown in Fig. 4 but the specific angle is not disclosed). It is clear that the ridge portions (e.g. 12a and 13a are perpendicular, not parallel thus Ishitobi meets the limitations of the claims.

It is argued that Ishitobi's device is covered with metal. The Examiner agrees that Ishitobi discloses that a box of three resonators being metal or the dielectric resonator cube itself may be metallized in manufacturing (0009), so Ishitobi in fact discloses that a well known three stage resonator filter in a metal plated box may be formed or the individual dielectric resonator cube may be metallized as is well-known in the art for manufacturing single resonator elements plated with a metal coating or unplated dielectric resonator elements within a metal housing.

### Second

While it is pointed out that the current invention only has two chamfered ridge portions and Ishitobi has four, the limitation of the claim does not exclude four ridge portions thus the argument is moot.

### Third

While the differences in functionality between the resonators of the current invention versus Ishitobi's resonators is discussed, the limitation where the modes are generated in the space surrounding the dielectric (with respect to the currently rejected

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claims recited above) is not claimed with respect to the rejection claims above thus the arguments are not commensurate with what is being claimed (with the exception of claim 22 which is rejected by USC103 and USC112 first paragraph "new matter").

Fourth

With respect to the modes and coupling, the limitation of rejected claims above is only that the coupling is adjustable (claim 17) and that three resonant modes exist (claim 1), thus Ishitobi meets the limitations of the claims and any functional difference of the resonant modes between the current invention and that of Ishitobi is moot.

Relative to claim 6, claim 6 is allowed thus the argument is moot.

Relative to claim 23, (which the Examiner believes is new independent claim 22), claim 22 is cited for new matter and also rejected under USC103 and the argument is moot.

With respect to claims 3-5 and 18-20, the Examiner asserts that Ishitobi discloses multiple resonators (e.g. three step band pass filter - 0009) further that it is contained within a machine structure (hence implicitly suggesting a waveguide) thus the argument is moot.

In view of the arguments above, the rejections of claims 1 – 5 and 17 – 20 are maintained by the Examiner.

It is noted that the Examiner withdraws the Claim and Drawing objections contained in the previous Office Action.

***Allowable Subject Matter***

Claims 6 – 14, 16, 21, 23, and 24 are allowed.

Ishitobi shows first and second ridge portions, not in parallel but the third and fourth ridges are in parallel to the first two ridge portions. Ishitobi further does not show the three ridges sharing an apex of the block where an angle of 40° to 50° is offered by the ridge surfaces, nor would it have been obvious to modify the invention of Ishitobi to meet the limitations of the claims, thus the claims are found in condition for allowance.

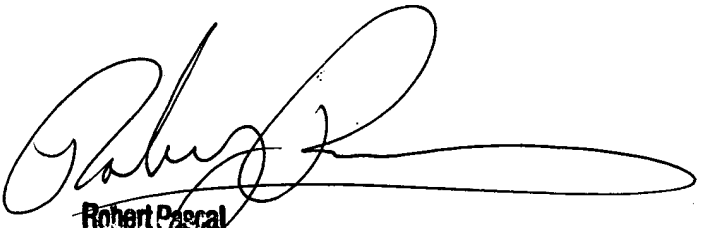
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dean O Takaoka whose telephone number is (703) 305-6242. The examiner can normally be reached on 8:30a - 5:00p Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

dot  
May 1, 2002

  
Robert Pascal  
Supervisory Patent Examiner  
Technology Center 2800